

204070-4640400T

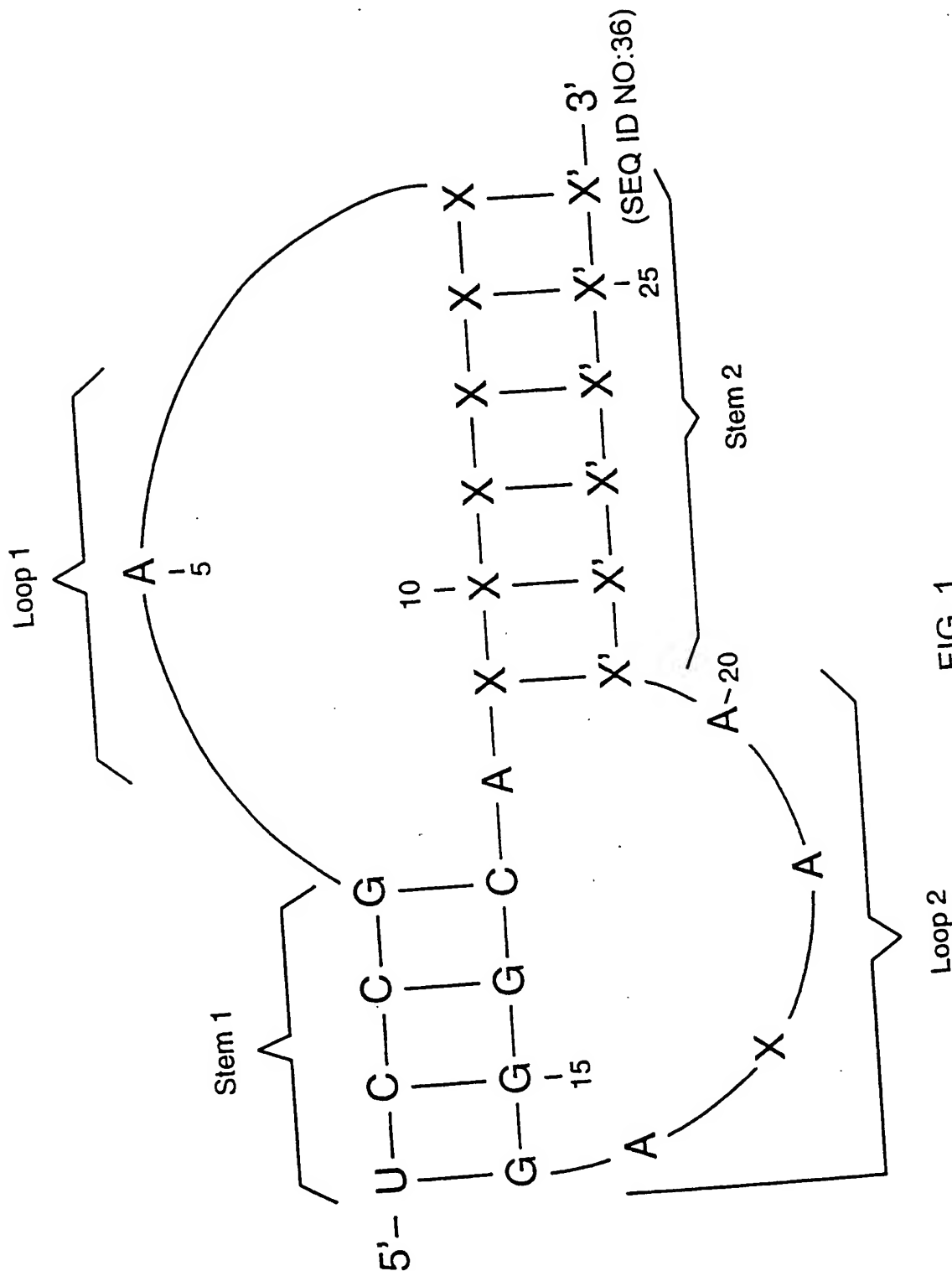


FIG. 1

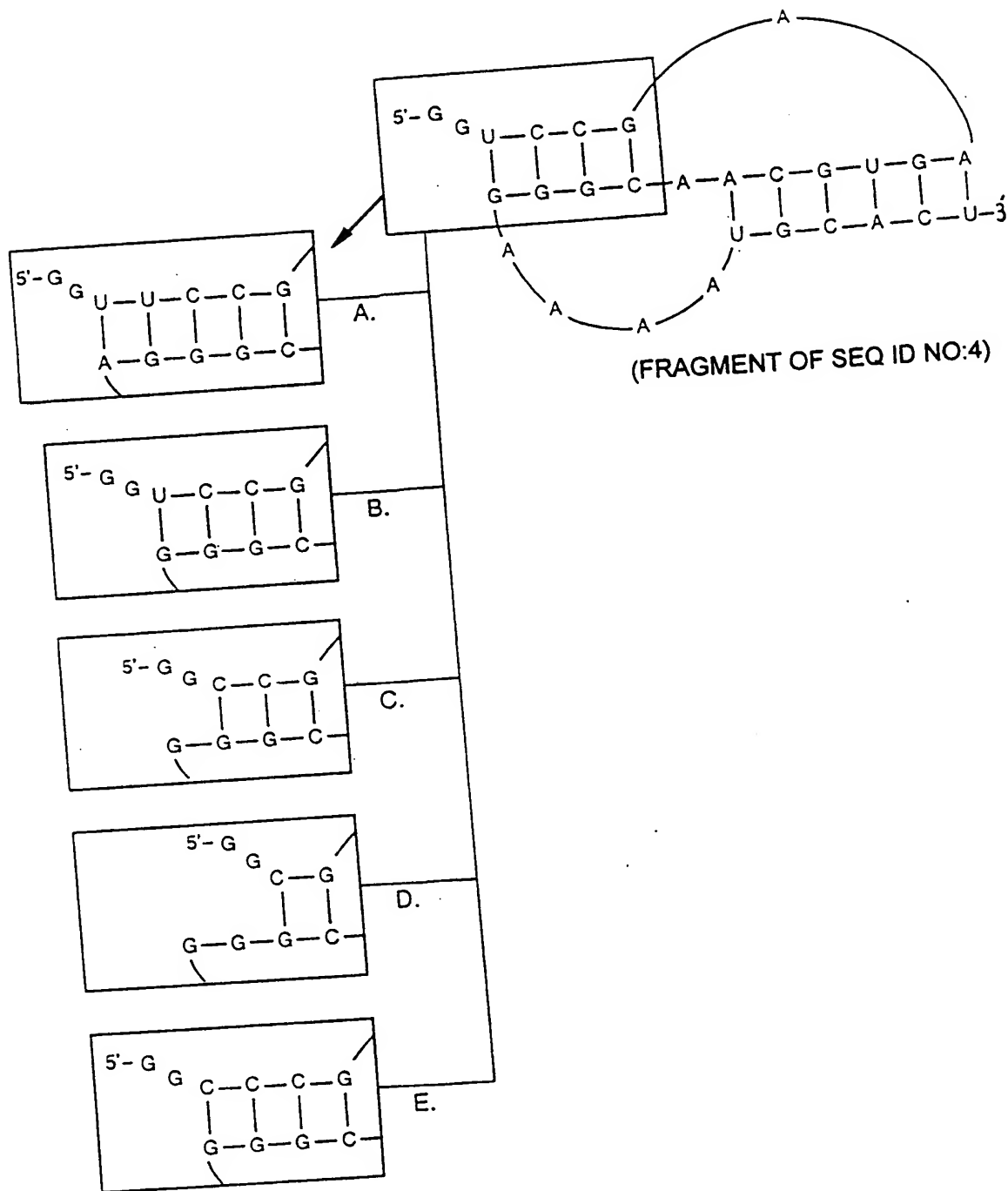


FIG. 2A

202010-260400T

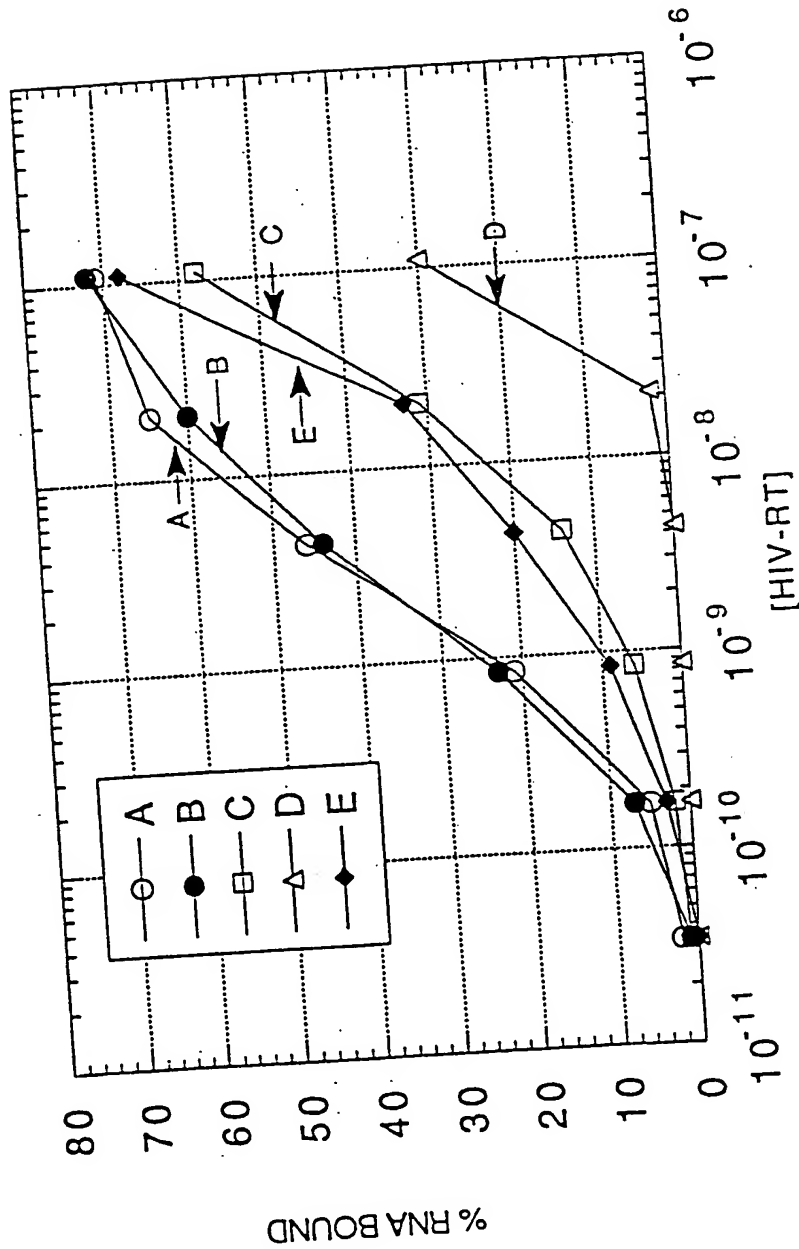


FIG.2B

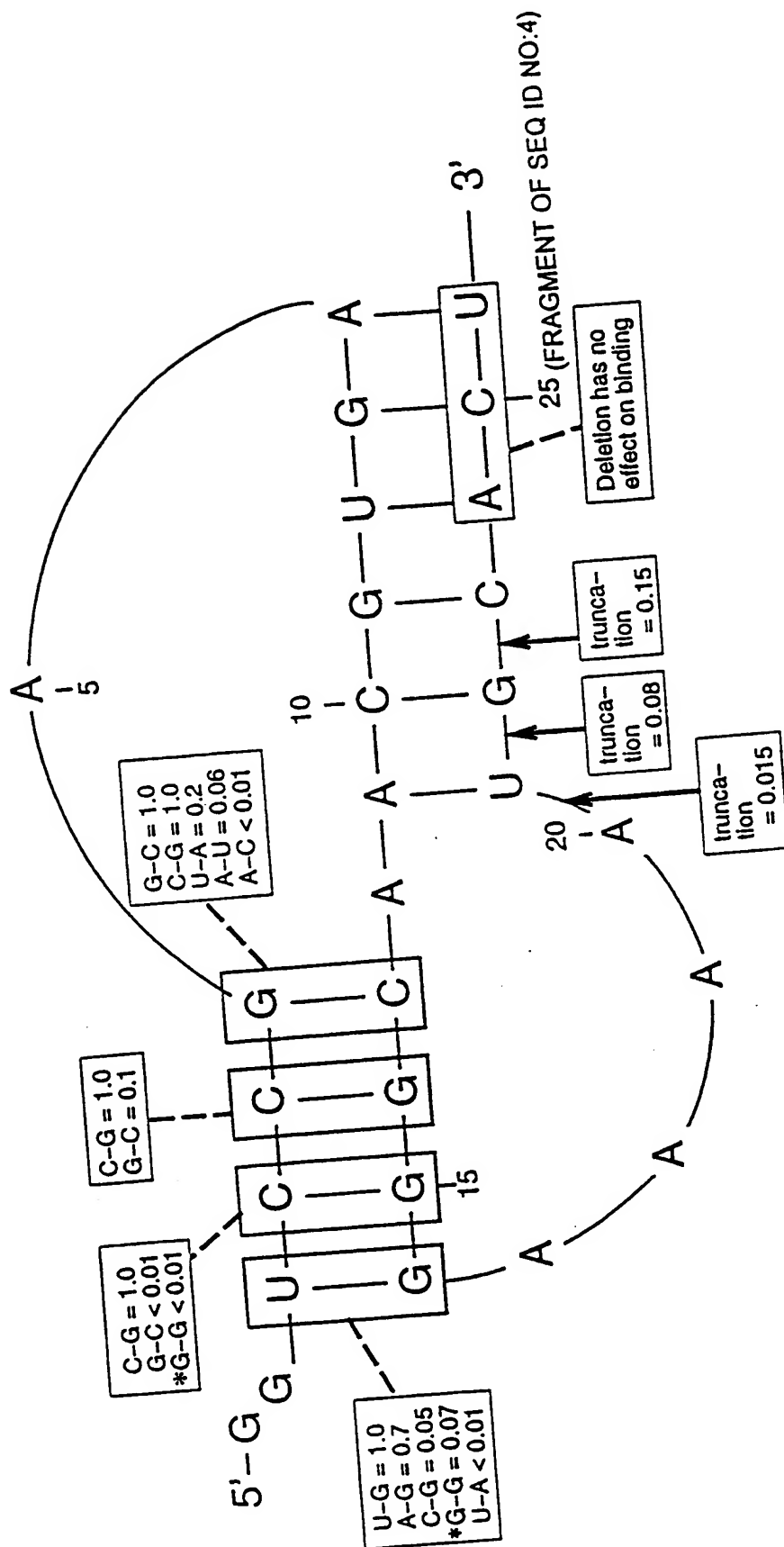


FIG. 3

204010" 2640400T

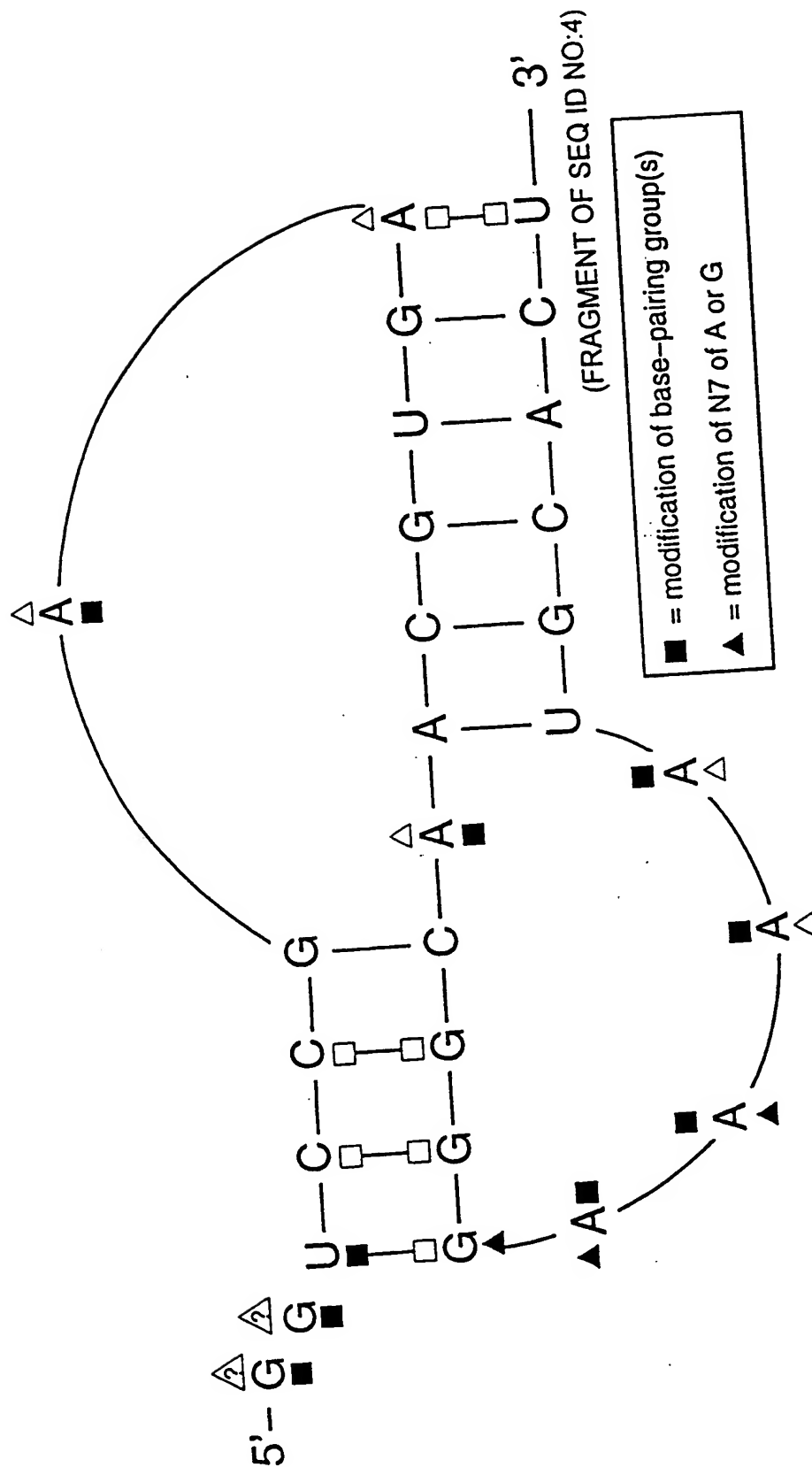


FIG. 4

204070-2640400F

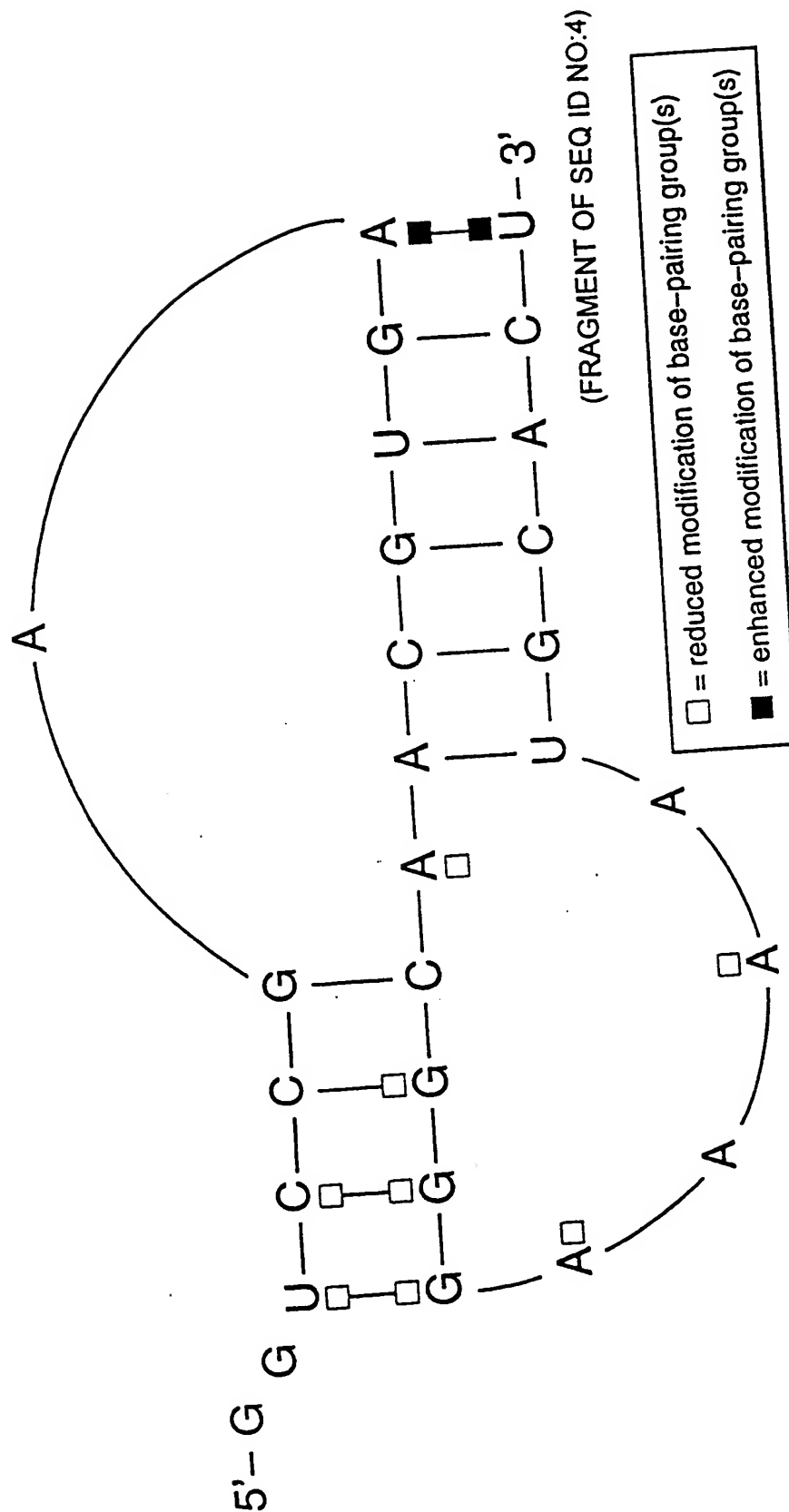


FIG. 5

202070" 2640400F

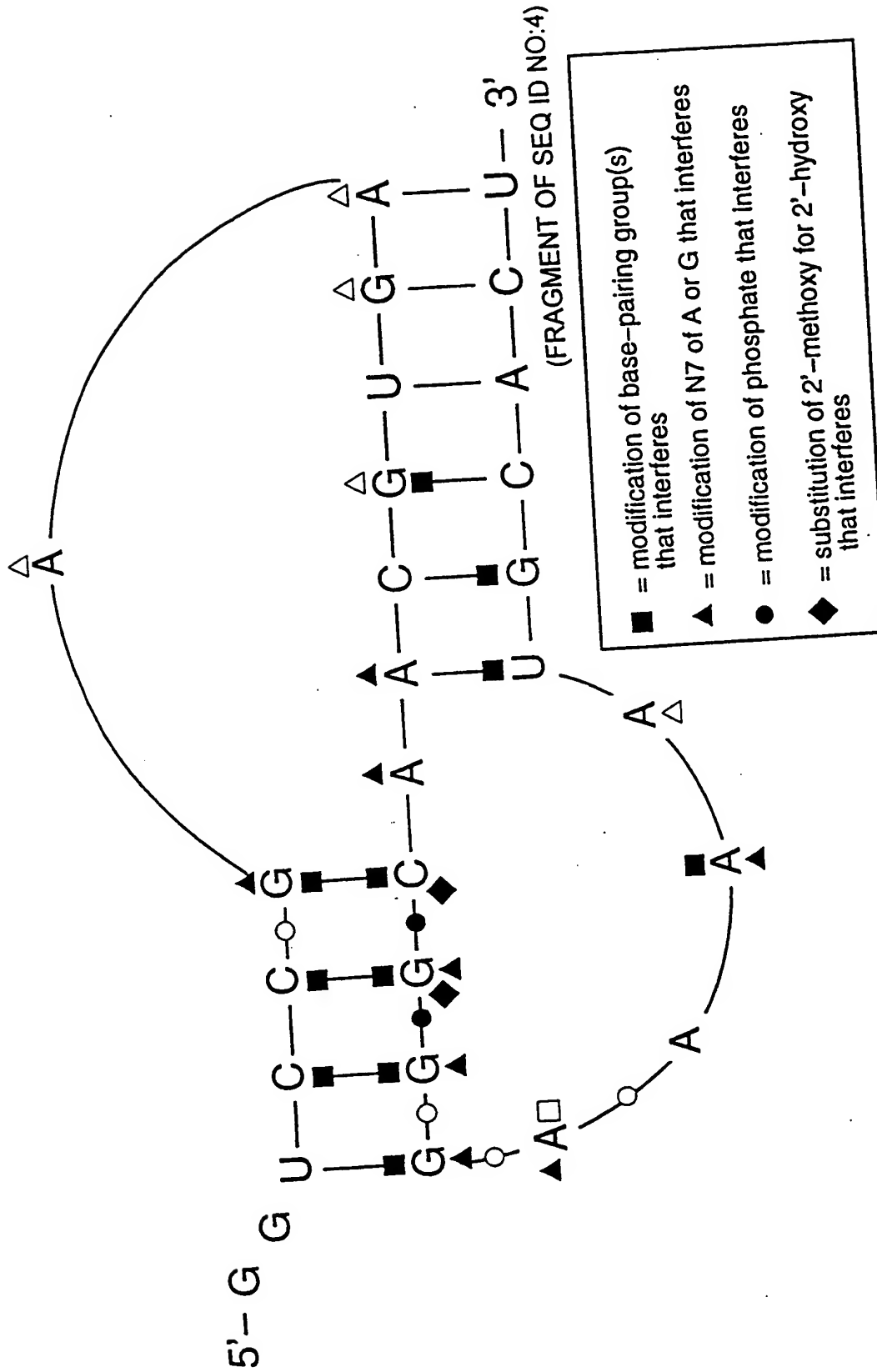
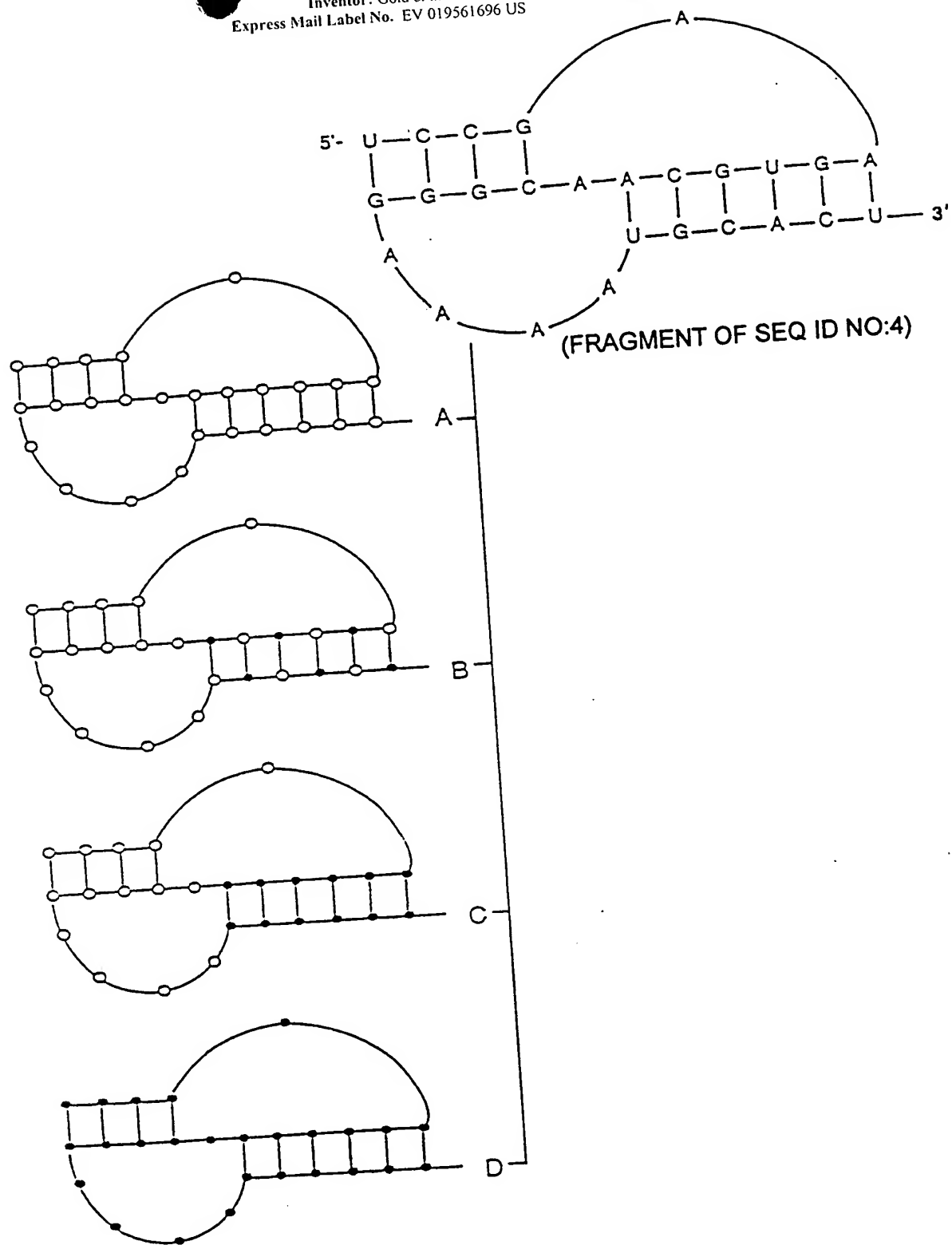


FIG. 6



● : denotes a 2' O-methyl instead of an OH,
 denoted by (O), at this position on the ribose

FIG. 7A

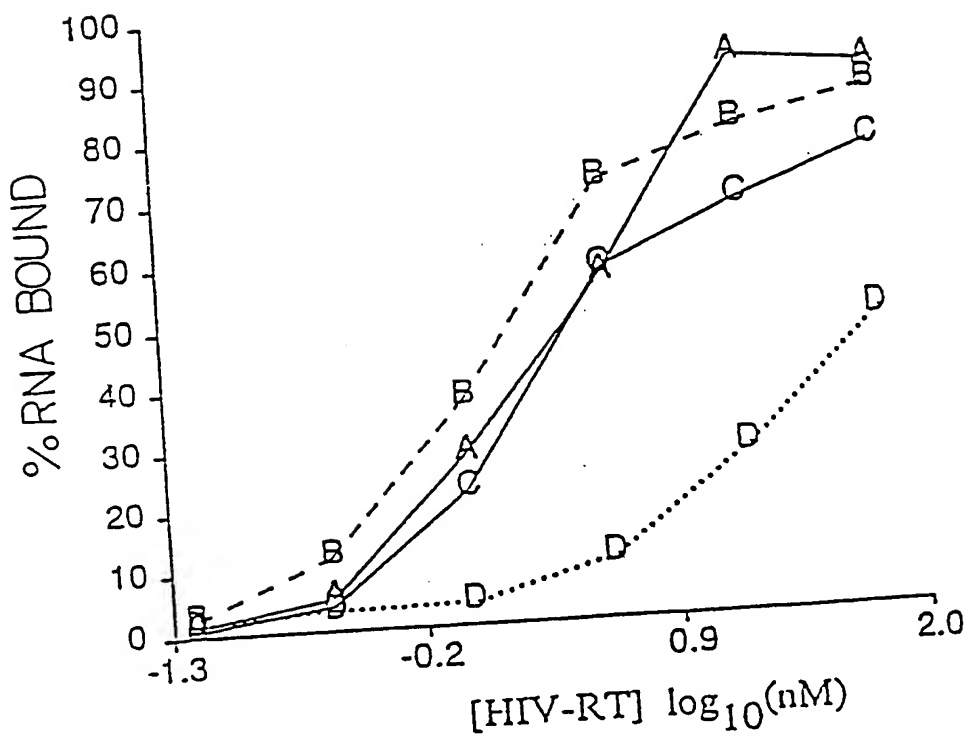


FIG.7B

20070101 16:04:00

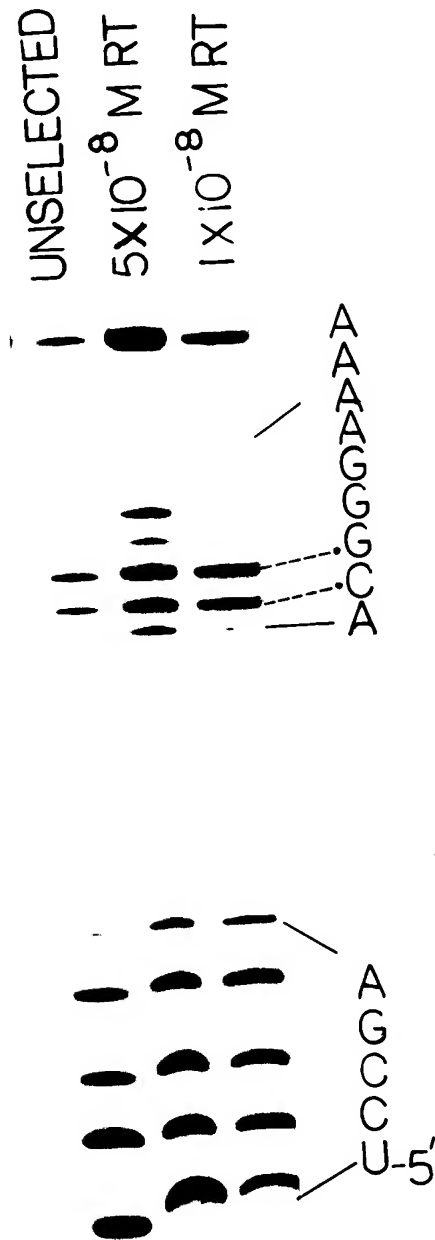


FIG. 8

5' -GGUCCGAAGUGCAACGGGAAAUGCACU- [30N] -
CUAUGAAAGAAUUUUUAUAUCUCUAUUGAAAC-3'
SEQ ID NO.: 37

Isolate number		SEQ ID NO:
3, 22, 29	uAGCUC <u>u</u> gAGGCUUU—CGU <u>u</u> CGUUCQAGcuau	14
14	uGCA <u>u</u> gAGGCGGU—AA <u>u</u> CGUGUUCQUGcu	15
20	uGGUGA <u>u</u> gAGGCCG—AU <u>u</u> CGUGUUCQUCGCCGcu	16
4	uGACGC <u>u</u> gAGGUCUU—GGU <u>u</u> ACUGUUCQUGGCUcu	17
30	uCUGG <u>u</u> gAGACUUG—AA <u>u</u> GUCGUUCQCCAGGUcu	18
38	uCCCG <u>u</u> gAGCAUA—AA <u>u</u> GUCGUUCQUGGGGUcu	19
39	uGGGA <u>u</u> gAGGUU—CC <u>u</u> CGUUCQUCCCGCACCcu	20
2, 6, 9	uAGCGA <u>u</u> gAGUGA—UA <u>u</u> CGUGUCQAUCGUGcu	21
13, 26	uCACAG <u>u</u> gAGCCUU—CU <u>u</u> GGUGGUCQUGUGUGcu	22
7	uUGUU <u>u</u> gAGUGGUUGAUUCCA <u>u</u> GGUCQAACcu	23
35	uGCCU <u>u</u> gAGCUGU—UU <u>u</u> AGCGGUCQAGGUCGUcu	24
24	uCAAGC <u>u</u> gAGACUU—AG <u>u</u> UCUGCUCQUGUGcu	25
8	uUGCG <u>u</u> gAGGUUAA—UU <u>u</u> CGUGGUGCAUGCCACu	26
40	uUCAA <u>u</u> gAGGUAUG—UA <u>u</u> AUGAUGGUGCGUGCGcu	27

1	uGCGGGAGAGUCUU—UU <u>u</u> GACGUUGCUCUGCGcu	28
17	uCAUGGGAGCC <u>u</u> AUCGA—UUC <u>u</u> UGGGUGUUGCcuanga	29
23, 27	uUGCACAGAGCCAA—UU <u>u</u> UGUGUUGCUGUGcu	30
18, 34	uGGCCAGAGCUJAAA—UU <u>u</u> CAAGUGUUGCUGGCCcu	31
19	uCAUAGCAGUCCUUGAUACUAUG <u>u</u> GAUGGUGGcuanga	32
37	uGGAUGCAAGUJAA—CU <u>u</u> CGUGGUGGCAUCCGUCcu	33
31	uCAGUGGAGAUUAAGCCUCGCUAGGGG <u>u</u> CCGcuau	34

FIG. 9

10040497.010702

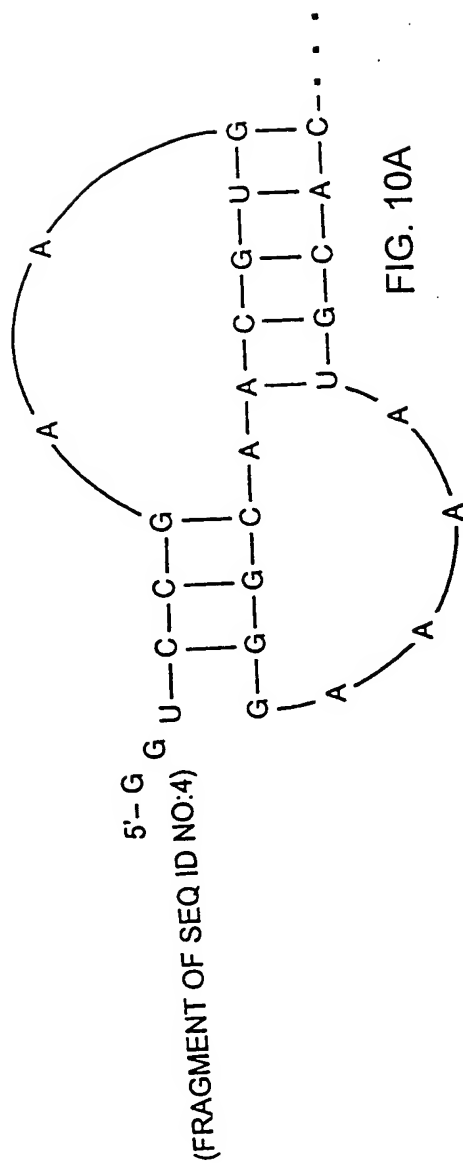


FIG. 10A

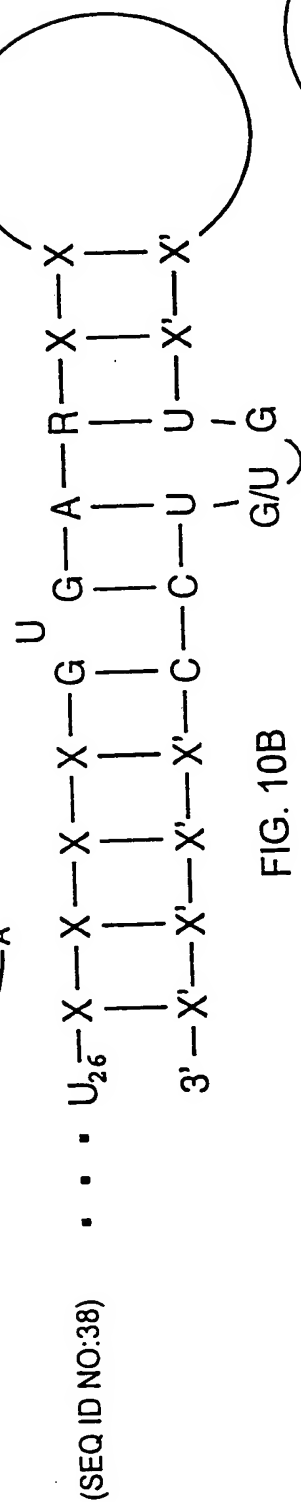


FIG. 10B

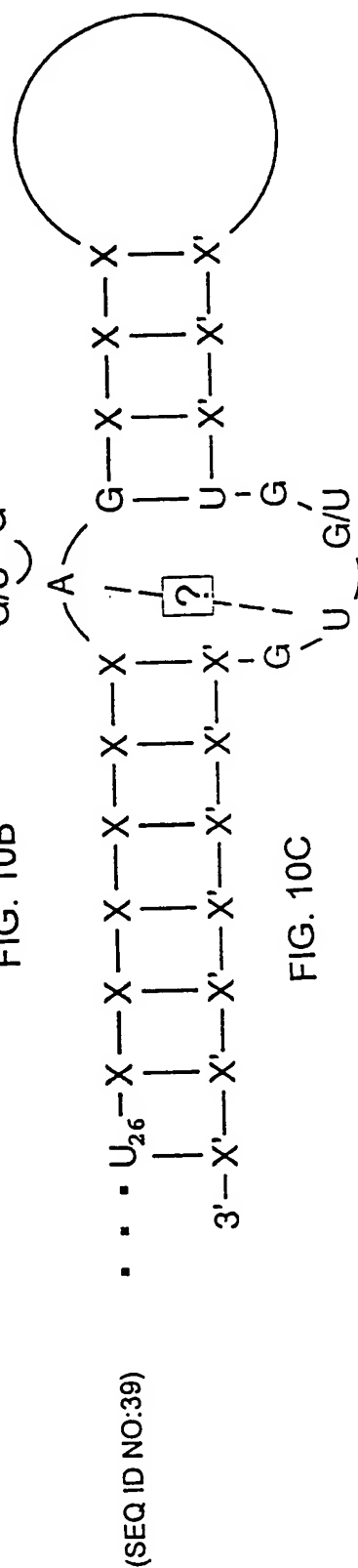


FIG. 10C

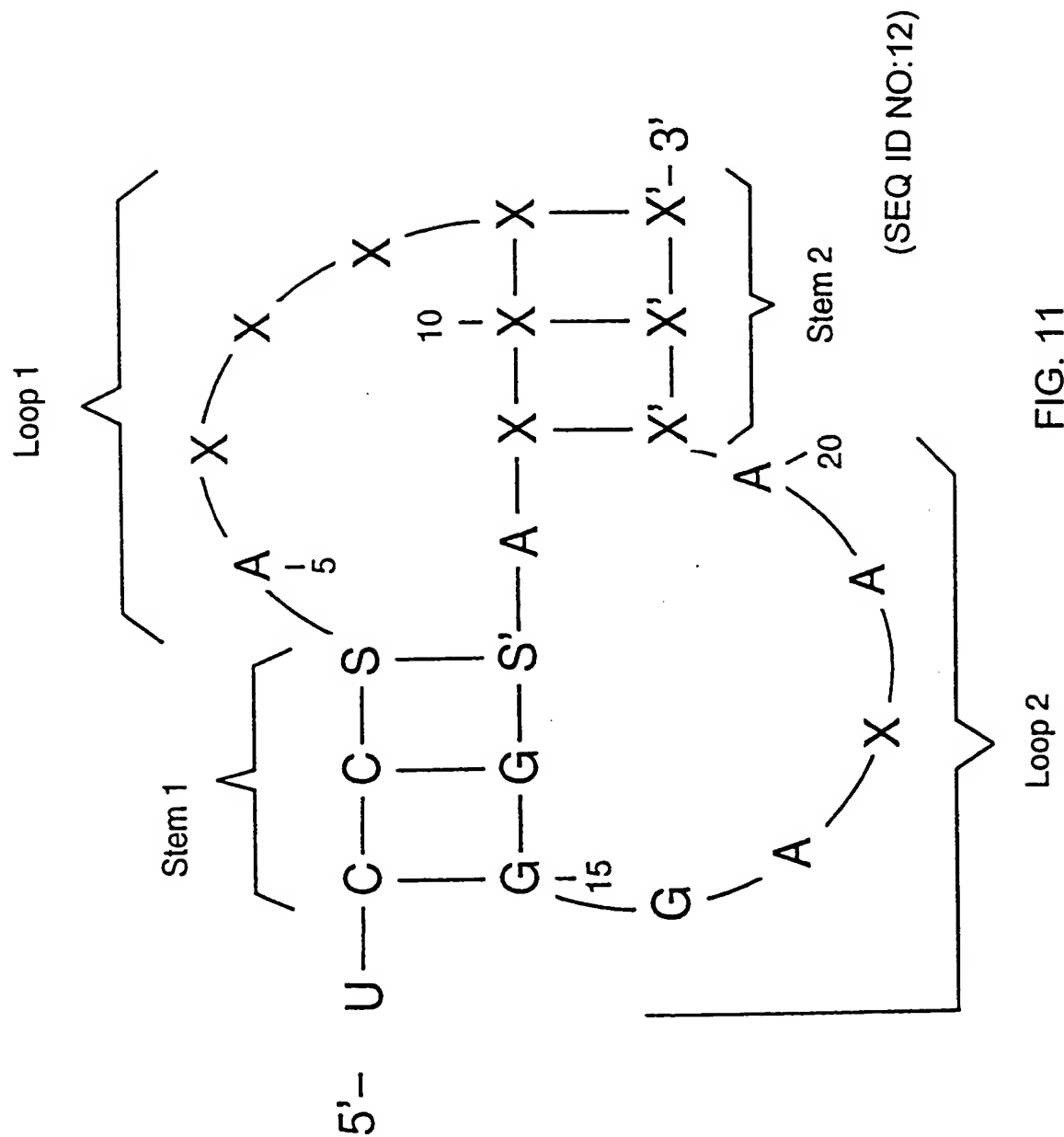


FIG. 11

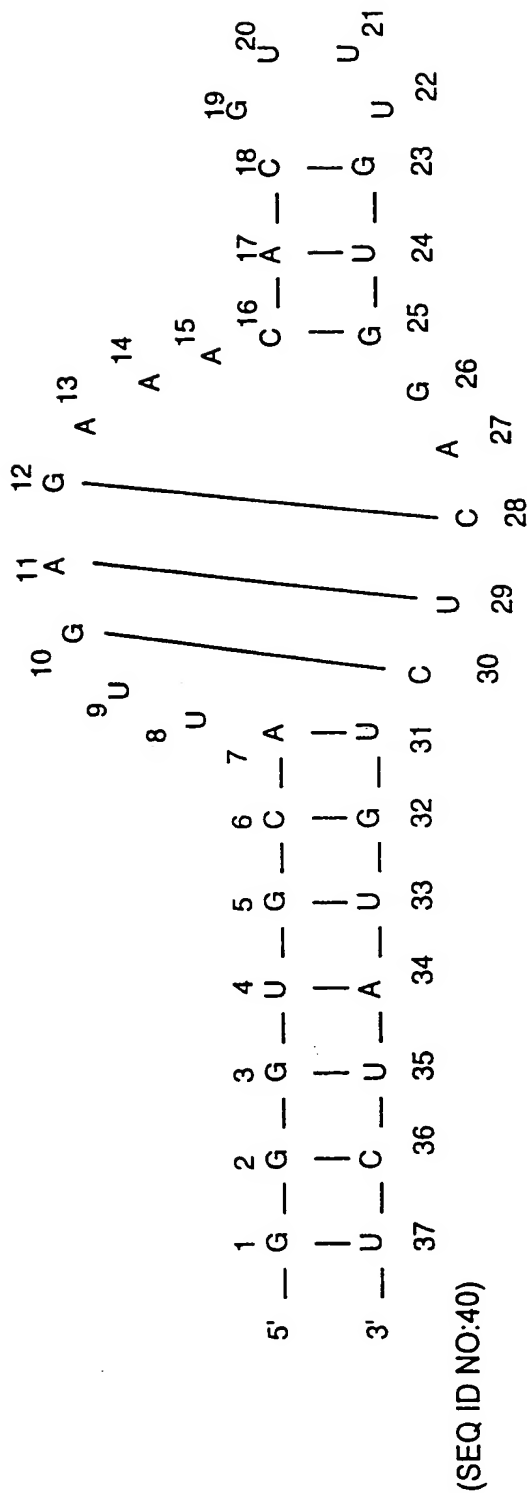


FIG. 12A

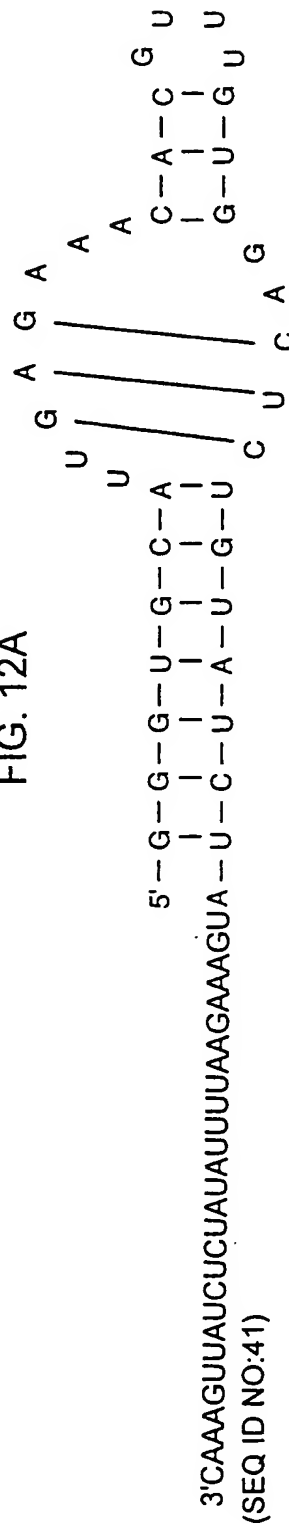


FIG. 12B

(SEQ ID NO:42) 5' GTTCAATAGAGATATAAAATTC 3'

FIG. 12C

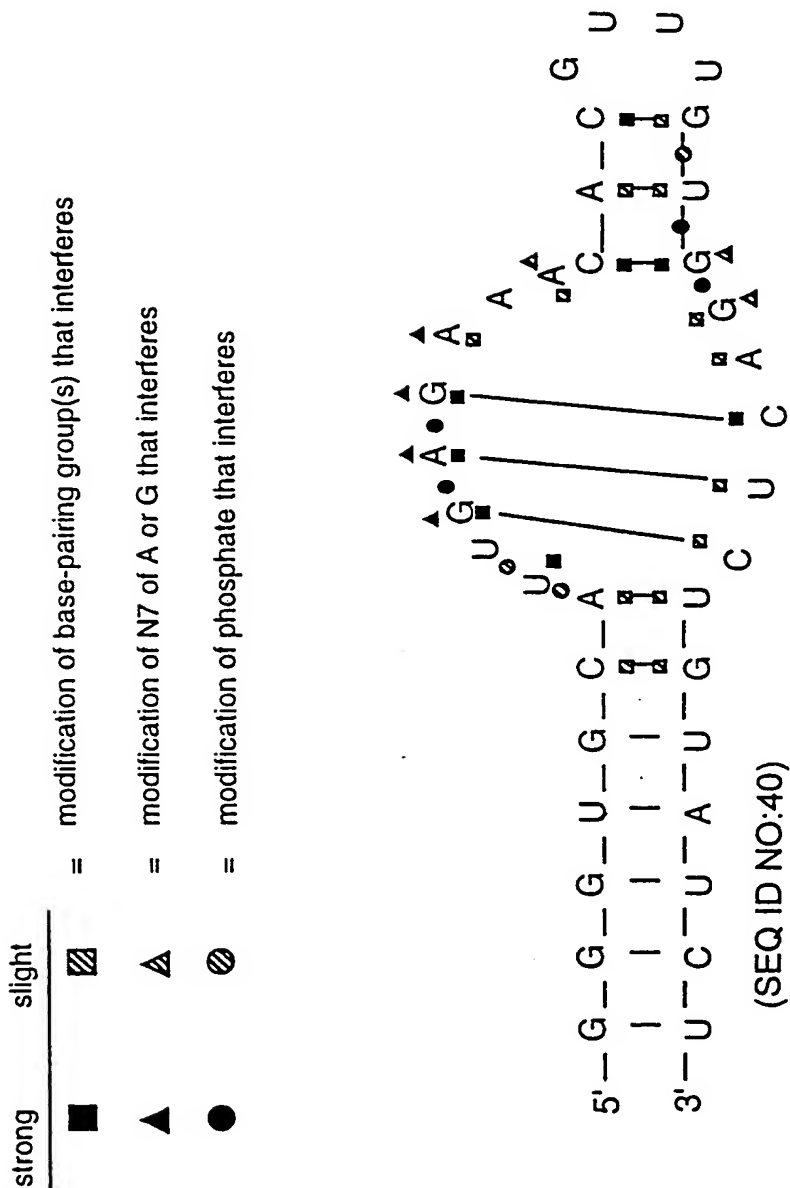


FIG. 14



FIG. 15

202070" 2540400E

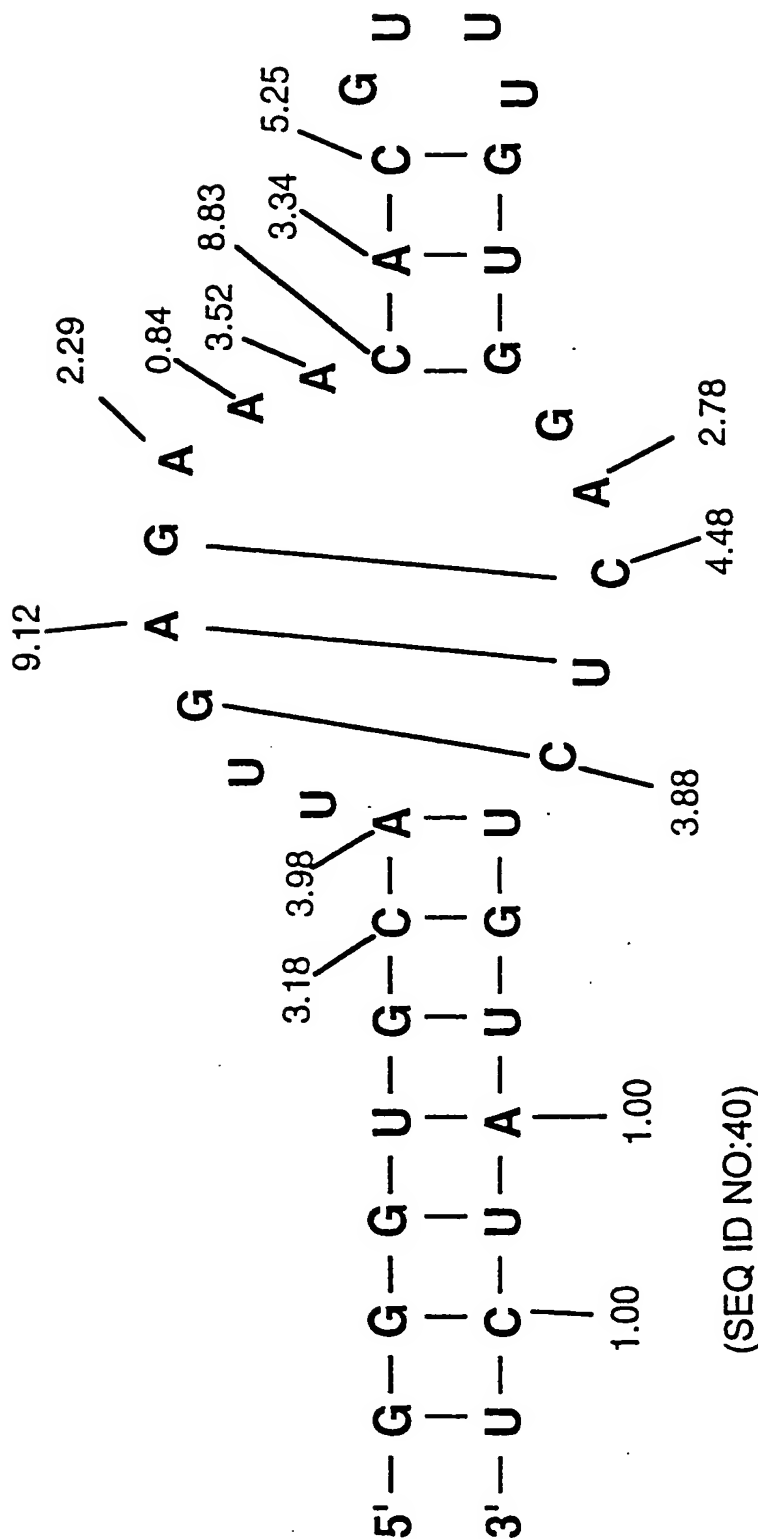


FIG. 16

202070" 2640400F

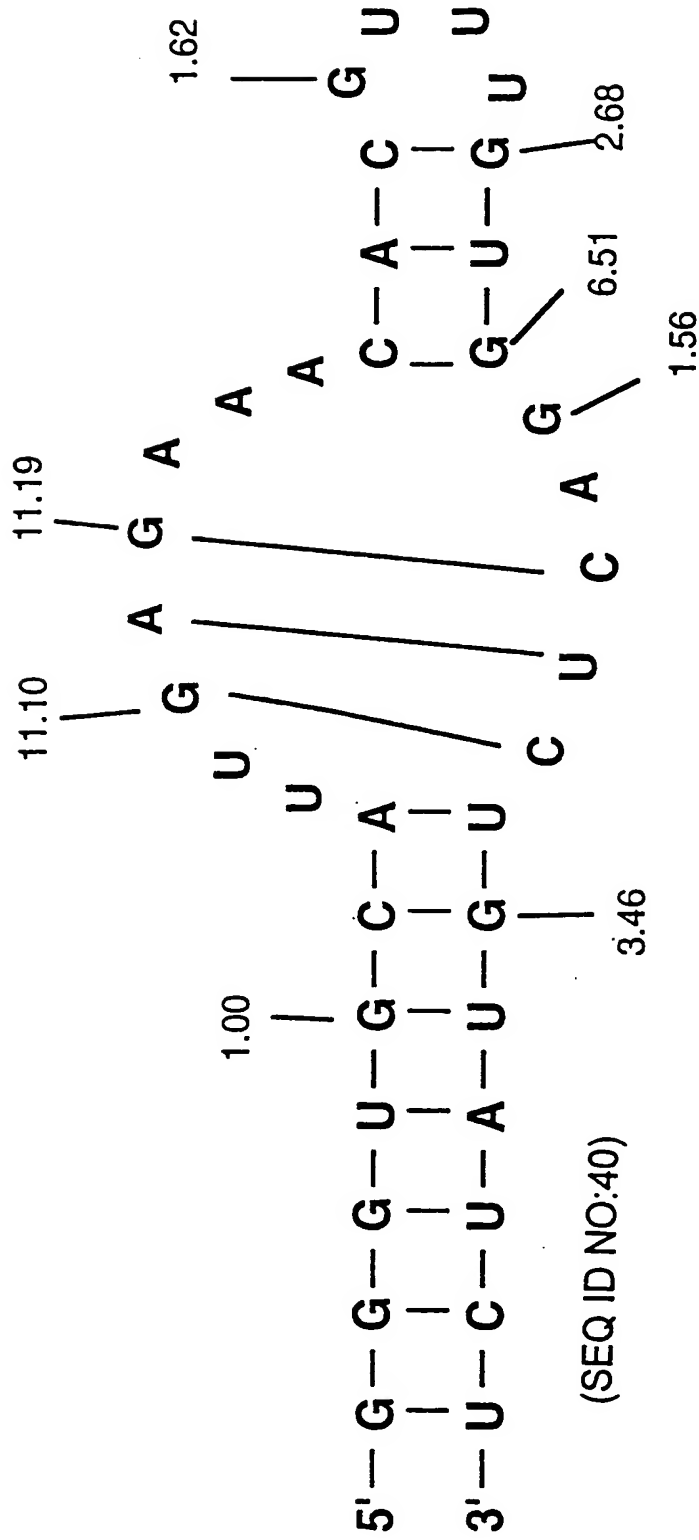
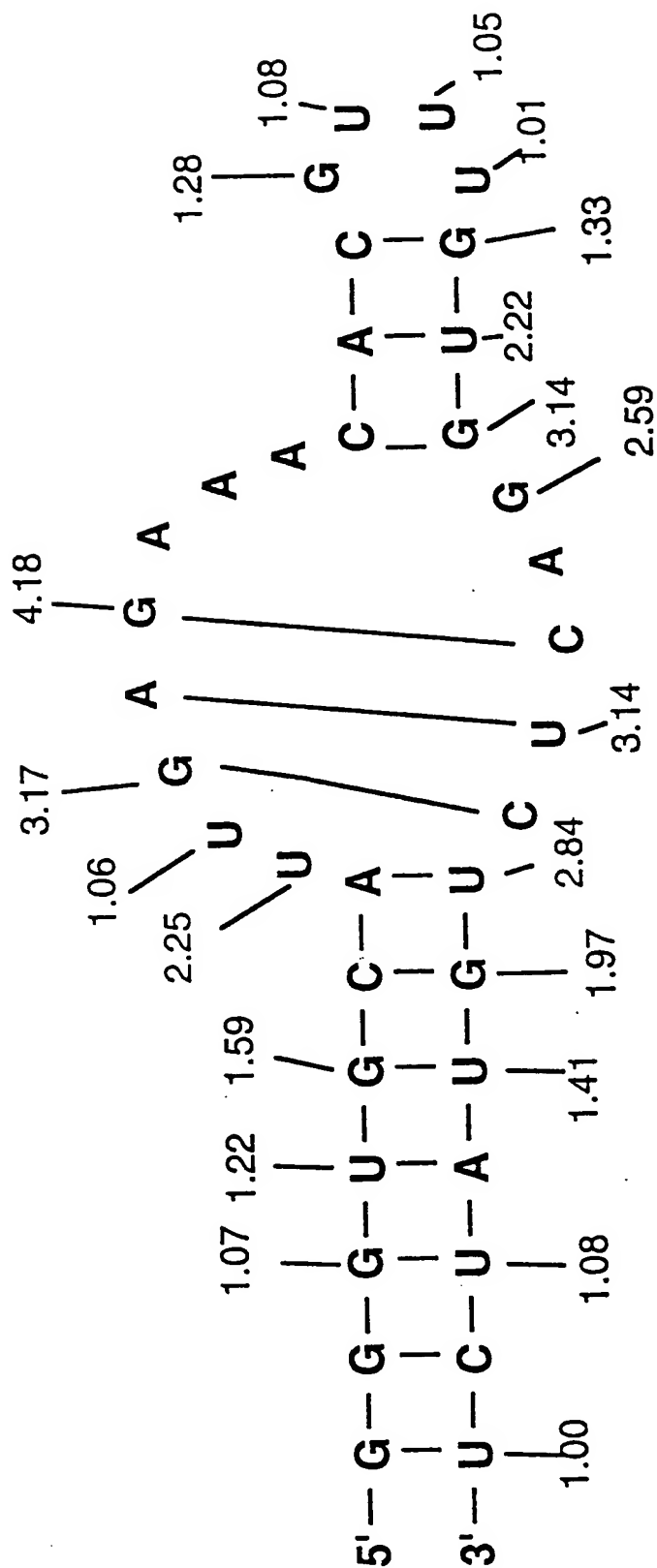


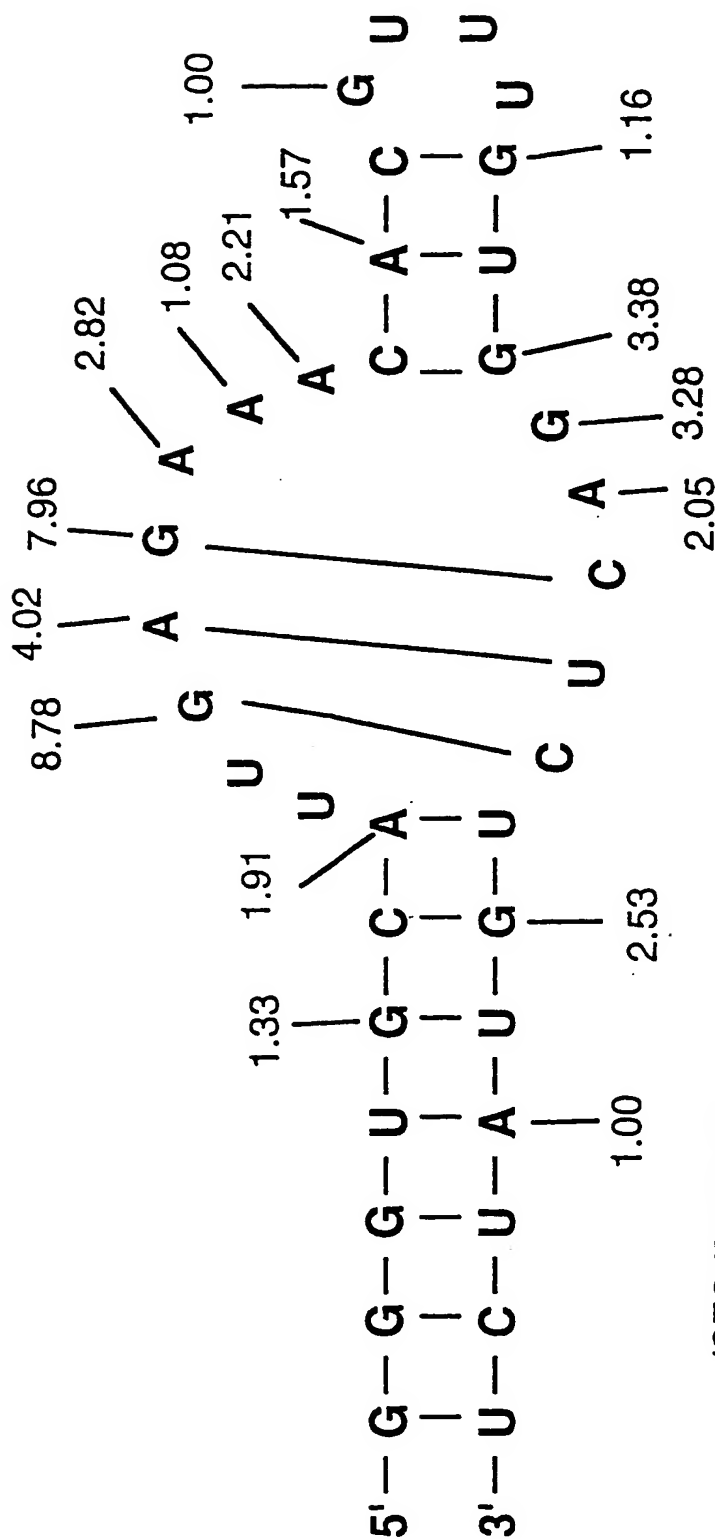
FIG. 17

202070" 26104007



(SEQ ID NO:40)

FIG. 18



(SEQ ID NO:40)

FIG. 19

SEQ ID NO.:43

5'-GGGACUAUUGAGGCCUCCGACC-6a-CACACAGAGGUAAGAGGAUCCGGG-3'

Biased ligand sequences

SEQ ID NO.:

6a	<u>GGGUGCAUUGAGAAAACACGU-UUGUGGACUCUGUAUCU</u>	40
1	<u>DGGUGCGUUGAGAAAACAGGU-UUUUGGACUCCGUACCA</u>	45
2	<u>GUAUGCAUUGAGAGUCACAC-UUGUGGACUCUGCAUCC</u>	46
3	<u>AGAUGGAUUGAGAAAACACUA-UUAUGGACUCUCCAUCC</u>	47
4	<u>AGCUUCGUGGAGAUACACGU-UGAUGGACUCCGAAGCA</u>	48
5	<u>UCGUACGUUGAGAAAACAAGU-UUAUGGACUCUGUAACCU</u>	49
6	<u>UCGAUCGUUGAGAUACACGC-UAGUGGACUCCGAAACU</u>	50
8	<u>UACUGCAUCGAGAUACACGU-UUGUGGACUCUGCACAU</u>	51
9	<u>UGAUACGUUGAGAAAACACAA-UGCUGGACUCGCGAUCC</u>	52
10	<u>GCCUGCAUUGAGAAAACAGGA-UUCUGGACUCUGCCACU</u>	53
12	<u>CGCUAUGUUGAGAAAACACUU-UGCUGGACUCGCUAGCU</u>	54
13	<u>UACUGCAUCGAGAAAACACGU-AAGUG-ACUCUGCAUCC</u>	55
15	<u>CGGUACGUUGGAGAUACACGA-AGAUGGACUCCGUUAUCC</u>	56

FIG. 21-A

202070" 2540400F

SEO ID NO.:

17	<u>AACUCCAUCGAGAGAAACACGA</u> - <u>UAGUGGACUCUGGAGCU</u>	57
18	<u>GGAGACGUCGAGAGAAACACGU</u> - <u>UUGUGGACUCCGUCUCU</u>	58
21	<u>AGCUACAUCGAGAGAAACAGA</u> - <u>UUUUGGACUCUGUAGCG</u>	59
23	<u>AAGUGCAUUGAGAGUACAAAU</u> - <u>GAUUGGACUCUGGACAC</u>	60
24	<u>UGCUACGUUGAGAGUACACGU</u> - <u>UGAUGGACUCCGUAGCU</u>	61
25	<u>AGCUACGUUGAGAGUACACGU</u> - <u>UACGUGG - CUCCGUAGCC</u>	62
27	<u>GAGUGGCUCGAGAAACAGGU</u> - <u>UGCUGGACUCGCCCCACAU</u>	63
28	<u>UCGUGCGUCGAGCAACACGU</u> - <u>UGAUGGACUCGCGACAG</u>	64
29	<u>GGCACCGUUGAGAGAAACACAU</u> - <u>CGGUGGACUCCGUGCCC</u>	65
30	<u>UCCUGCAUUGAGAGAAACAGUG</u> - <u>AUCUGGACUCUGCAACU</u>	66
31	<u>CUGUGGAUUGAGCAACACGU</u> - <u>GAGUGGACUCUCCACAU</u>	67
32	<u>CCGUGCGUUGAGACACACAC</u> - <u>CGAUGGACUCCGCAUGU</u>	68
33	<u>AGCUGCAUCGAGAGUACACGA</u> - <u>UUGUGGACUCUGGAGCC</u>	69
35	<u>AGAUUCGUUGAGAGAAACACAU</u> - <u>GGGUGGACUCUCCCCGUA</u>	70
36	<u>AGAUGGAUUGAGAGAAACACGU</u> - <u>UCGUGGACUCUCCACAU</u>	71
37	<u>GACUGCAUCGAGAGAAACACUG</u> - <u>AUGUGGCCUCCGACCGG</u>	72

FIG. 21-B

204010" 4644400T

SEQ ID NO.:

38	<u>AGCUACGUUGAGAAACAGUA-UAAUGGACUCCGUAGCU</u>	73
40	<u>GAGUGCGUCGAGAAACACAU-UUGUGGACUCCGCCACAC</u>	74
42	<u>UCGUACGUUGAGAAACACGC-UAGUGGACUCCGUAVGU</u>	75
43	<u>AGAUACGUUGAGAGACACGC-ACGUGGACUCCGUUAUCU</u>	76
44	<u>AGGAUACACAGAGAAACACCGUGGGUGG-CUCCCUUAU</u>	77
45	<u>GUGCGCAUCGAGAAACACCGU-UGAUGGACUCUGCAUGCAC</u>	78
47	<u>GAGAGGAUCGAGAAACACCGU-AUGUGGACUCUCCAUUCU</u>	79
48	<u>GGAUGGAUUGAGACACACCGU-AUGUGGACUCUCCAUCA</u>	80
49	<u>UCGGGCAUUGAGAUACACCGU-AGAUGGACUCUGUCUCA</u>	81
50	<u>UGGACCGUAGAGAAACACCGUUUGAUGG-CUCCCUUCUGU</u>	82

FIG. 21-C

202070" 2640400T

6a	G	G	G	U	G	C	A	U	U	G	A	G	A	A	A	C	A	C
wt	10	19	16	30	20	31	18	37	22	38	38	38	36	25	38	38	38	30
Δ	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A	12	8	8	5	11	0	18	0	2	0	38	0	36	25	38	0	38	3
C	3	8	14	1	3	31	1	1	14	0	0	0	2	2	0	38	0	30
G	10	19	16	2	20	4	19	0	0	38	0	38	0	2	0	0	0	5
U	19	2	0	30	4	1	0	37	22	0	0	0	0	9	0	0	0	0
bp	16	20	26	31	33	35	35			38	38	38				38	38	26

FIG. 22A-1

6a	G	G	G	U	G	C	A	U	U	G	A	G	A	A	A	C	A	C
wt	.26	.50	.42	.79	.53	.82	.47	.97	.58	1.00	1.00	1.00	.95	.66	1.00	1.00	1.00	.79
D	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
A	.32	.21	.21	.13	.29	.00	.47	.00	.05	.00	1.00	.00	.95	.66	1.00	.00	1.00	.08
C	.08	.21	.37	.03	.08	.82	.03	.03	.37	.00	.00	.00	.05	.05	.00	1.00	.00	.79
G	.26	.50	.42	.05	.53	.11	.50	.00	.00	1.00	.00	1.00	.00	.05	.00	.00	.00	.13
U	.50	.05	.00	.79	.11	.03	.00	.97	.58	.00	.00	.00	.00	.24	.00	.00	.00	.00
bp	.42	.53	.68	.82	.87	.92	.92	.00	.00	1.00	1.00	1.00	.00	.00	.00	1.00	1.00	.68

FIG. 22B-1

204010" 46404000F

G	U	space	U	U	G	U	G	G	A	C	U	C	U	G	U	A	U	C	U
25	22	35	23	14	19	38	38	37	36	38	38	38	17	28	15	31	15	26	19
0	0	35	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
7	8	0	9	7	11	0	0	0	36	0	0	0	0	0	2	31	4	7	3
1	5	0	1	4	5	0	0	0	0	38	0	38	20	9	20	6	10	26	11
25	3	0	5	13	19	0	38	37	0	0	0	0	1	28	1	1	9	5	5
5	22	3	23	14	3	38	0	0	0	0	38	0	17	0	15	0	15	0	19
18				18	26	38	38			38	38	38	35	35	33	31	26	20	16

FIG. 22A-2

G	U	space	U	U	G	U	G	G	A	C	U	C	U	G	U	A	U	C	U
.66	.58	.92	.61	.37	.50	1.00	1.00	.97	.95	1.00	1.00	1.00	.45	.74	.39	.82	.39	.68	.50
.00	.00	.92	.00	.00	.00	.00	.00	.03	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.18	.21	.00	.24	.18	.29	.00	.00	.00	.95	.00	.00	.00	.00	.00	.05	.82	.11	.18	.08
.03	.13	.00	.03	.11	.13	.00	.00	.00	.00	1.00	.00	1.00	.53	.24	.53	.16	.26	.68	.29
.66	.08	.00	.13	.34	.50	.00	1.00	.97	.00	.00	.00	.00	.03	.74	.03	.03	.24	.13	.13
.13	.58	.08	.61	.37	.08	1.00	.00	.00	.00	.00	1.00	.00	.45	.00	.39	.00	.39	.00	.50
.47	.00	.00	.00	.47	.68	1.00	1.00	.00	.00	1.00	1.00	1.00	.92	.92	.87	.82	.68	.53	.42

FIG. 22B-2

2040T0" 2640400T

6a	G	G	G	U	G	C	A	U	U	G	A	G	A	A	A	C	A	C
wt	-.37	-.13	-.21	.16	-.10	.19	-.16	.34	-.05	.37	.37	.37	.32	.03	.37	.37	.37	.16
A	.19	.09	.09	.01	.16	-.13	-.16	-.13	-.07	-.13	.37	-.13	.32	.03	.37	-.13	.37	-.05
C	-.05	.09	.24	-.09	-.05	.19	-.10	-.10	.24	-.13	-.13	-.13	-.07	-.07	-.13	.37	-.13	.16
G	-.37	-.13	-.21	-.07	-.10	-.02	.38	-.13	-.13	.37	-.13	.37	-.13	-.07	-.13	-.13	-.13	.01
U	.38	-.07	-.13	.16	-.02	-.10	-.13	.34	-.05	-.13	-.13	-.13	-.13	.11	-.13	-.13	-.13	-.13



FIG. 22C-1

204070" 45404007

G	U	space	U	U	G	U	G	G	A	C	U	C	U	G	U	A	U	C	U
.03	-.05		-.02	-.26	-.13	.37	.37	.34	.32	.37	.37	.37	-.18	.11	-.24	.19	-.24	.05	-.13
.06	.09		.11	.06	.16	-.13	-.13	-.13	.32	-.13	-.13	-.13	-.13	-.13	-.07	.19	-.02	.06	-.05
-.10	.01		-.10	-.02	.01	-.13	-.13	-.13	-.13	.37	-.13	.37	.40	.11	.40	.03	.14	.05	.16
.03	-.05		.01	.22	-.13	.37	.37	.34	-.13	-.13	-.13	-.13	-.10	.11	-.10	-.10	.11	.01	.01
.01	-.05		-.02	.26	-.05	.37	-.13	-.13	-.13	-.13	.37	-.13	.11	-.13	-.24	-.13	-.24	-.13	-.13



FIG. 22C-2

202070" 26404007

6a	G1/U37	G2/C36	G3/U35	U4/A34	G5/U33	C6/G32	A7/U31	C16/G25	A17/U24	C18/G23	G19/U22
WT	2	16	8	28	2	28	16	38	38	19	9
AU	6	0	6	0	10	0	16	0	38	0	2
UA	2	1	0	28	2	0	0	0	0	2	1
GC	5	16	7	2	18	6	18	0	0	3	3
CG	1	2	8	0	1	28	1	38	0	19	1
GU	1	1	8	0	2	0	1	0	0	1	9
UG	4	1	0	0	0	1	0	0	0	0	0
AC	3	3	0	2	1	0	2	0	0	0	1
CA	1	1	2	0	0	0	0	0	0	9	0
other	16	13	7	8	2	3	0	0	0	4	14

FIG. 23A

6a	G1/U37	G2/C36	G3/U35	U4/A34	G5/U33	C6/G32	A7/U31	C16/G25	A17/U24	C18/G23	G19/U22
WT	.05	.42	.21	.74	.05	.74	.42	1.00	1.00	.50	.24
AU	.16	.00	.16	.00	.26	.00	.42	.00	1.00	.00	.05
UA	.05	.03	.00	.74	.05	.00	.00	.00	.00	.05	.03
GC	.13	.42	.18	.05	.47	.16	.47	.00	.00	.08	.08
CG	.03	.05	.21	.00	.03	.74	.03	1.00	.00	.50	.03
GU	.03	.03	.21	.00	.05	.00	.03	.00	.00	.03	.24
UG	.11	.03	.00	.00	.00	.03	.00	.00	.00	.00	.00
AC	.08	.08	.00	.05	.03	.00	.05	.00	.00	.00	.03
CA	.03	.03	.05	.00	.00	.00	.00	.00	.00	.24	.00
other	.42	.34	.18	.21	.05	.08	.00	.00	.00	.11	.37

FIG. 23B

202070" 26404007

6a	G1/U37	G2/C36	G3/U35	U4/A34	G5/U33	C6/G32	A7/U31	C16/G25	A17/U24	C18/G23	G19/U22
WT	-.34	.03	-.18	.35	-.34	.35	.03	.61	.61	.11	-.15
AU	.08	-.02	.08	-.02	.19	-.02	.03	-.02	.61	-.02	-.03
UA	.04	.01	-.02	.35	.04	-.02	-.02	-.02	-.02	.04	.01
GC	.05	.03	.11	.04	.40	.14	.46	-.02	-.02	.06	.00
CG	.01	.04	.19	-.02	.01	.35	.01	.61	-.02	.11	.01
GU	-.34	-.05	-.18	-.02	-.34	-.02	-.05	-.02	-.08	.01	-.15
UG	.09	.01	-.02	-.08	-.02	-.05	-.02	-.08	-.02	-.08	-.02
AC	.06	.00	-.02	.04	.01	-.02	-.03	-.02	-.08	-.02	.01
CA	.01	.01	.04	-.08	-.02	-.08	-.02	-.08	-.02	.16	-.02
other	.17	.09	-.07	-.04	-.20	-.17	-.25	-.25	-.25	-.15	.12

FIG. 23C

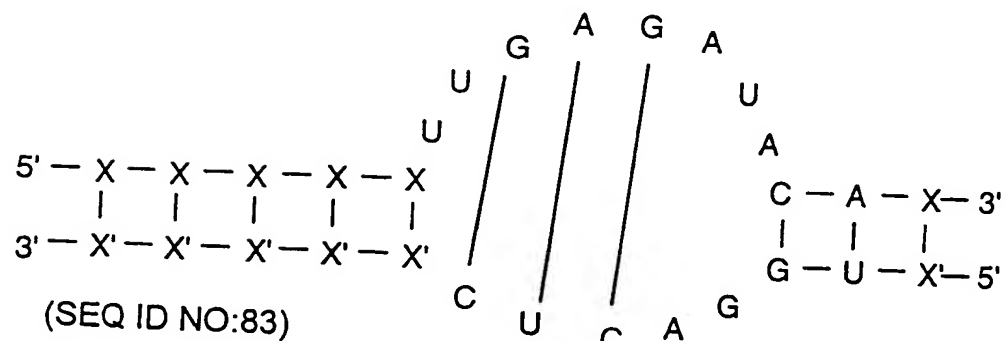


FIG. 24A

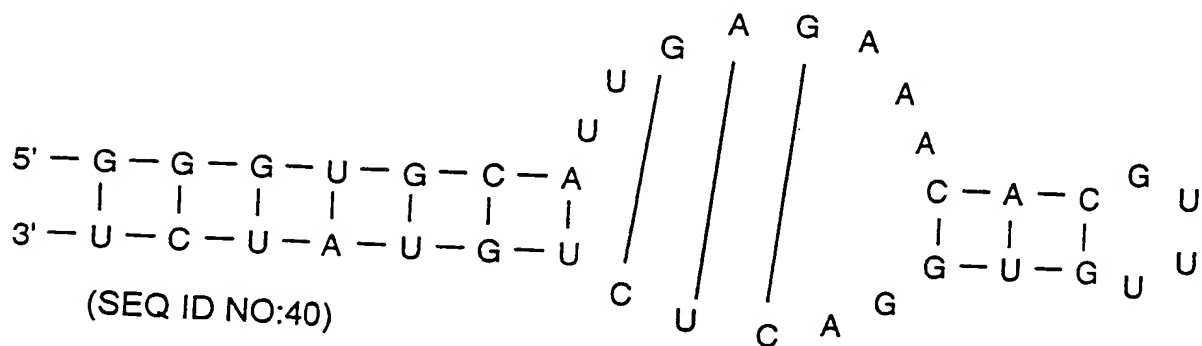


FIG. 24B

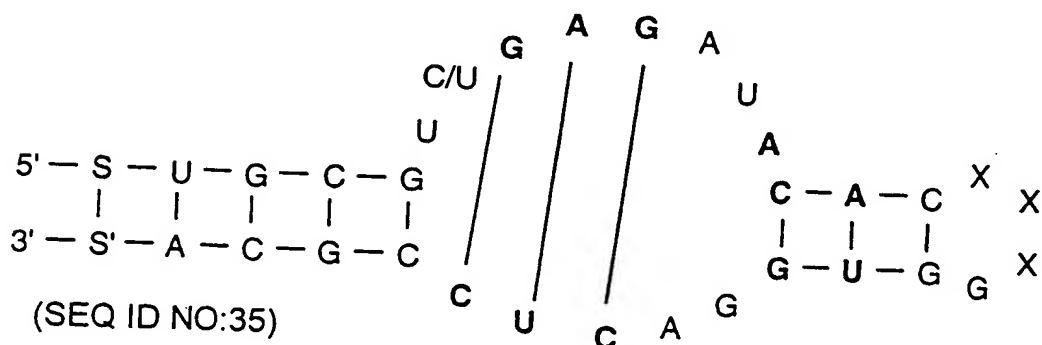


FIG. 24C

202070-26404007